

blood flowing through one or more lumens within the elongated tubular member is insulated from fluid or tissue external to the annular insulation.

21. (PREVIOUSLY AMENDED) The catheter of Claim 20, wherein the annular insulation extends over substantially the entire outer surface of the elongated tubular member.

22. (ORIGINAL) The catheter of Claim 20, wherein the distal end of the annular insulation is tapered.

23. (ORIGINAL) The catheter of Claim 20, wherein the annular insulation extends for from about 50 to 80% of the total length of the elongated tubular member.

24. (ORIGINAL) The catheter of Claim 20, wherein the annular insulation comprises a fluid-filled tubular member.

25. (ORIGINAL) The catheter of Claim 24, wherein the fluid is water or saline solution.

26. (ORIGINAL) The catheter of Claim 24, wherein the fluid is a gas.

27. (ORIGINAL) The catheter of Claim 20, wherein the annular insulation comprises a tubular member filled with insulative material.

28. (ORIGINAL) The catheter of Claim 27, wherein the insulative material is a synthetic polymeric fill.

29. (ORIGINAL) The catheter of Claim 20 which also comprises a pressure sensor at or adjacent to the distal end of the catheter.

30. (PREVIOUSLY AMENDED) The catheter of Claim 20 which is adapted to be useful for brain cooling.

31. (ORIGINAL) The catheter of Claim 20, wherein at least one lumen is in fluid communication with a source of cooled blood.

32. (ORIGINAL) The catheter of Claim 20, wherein at least one lumen is in fluid communication with a liquid pharmaceutical source.